IDR RID Report

Date Last Modified 12/7/95

Originator Michael Blazejewski

Phone No 301-982-5414 - ext. 300

Organization CTA/IV&V

E Mail Address mfb@cclink.gblt.inmet.com

Document 305-CD-033-01

Section 3.4.2.7.1 Data Processing Rationale **Page** 3-72

Figure Table NA

RID ID IDR 25

Review IDR

Originator Ref IVVRID-MB-1

Priority 2

Category Name Hardware

Actionee ECS

Sub Category

Subject Static Analysis for Data Processing at EDC

Description of Problem or Suggestion:

The Release B EDC DAAC Design Specification for the ECS Project document (305-Cd-033-001) incorrectly states that there is no difference in production processing requirements between average and busy days. The second paragraph on page 3-72 states that there was no variance between the average day analysis and the busy day analysis at the EDC DAAC. It goes on to state that no products nominally run less frequently than once per day. The approach used in this static analysis does not reflect the actual operational busy day. The HAIS August '95 Technical Baseline (based on AHWGP data) shows that there are some MODIS and ASTER products that are produced every 7, 10, 16 and 32 days, as well as every month, every 3 months and yearly. Each of these products results in 355 executions of the process (once per grid location) per product interval. The August '95 Technical Baseline presents these processes as executing (355/frequency) times per day (e.g., the 10 day product will have an activation rate of (355/10) = 35.5 times per day). There is no issue regarding the average day static analysis. However, page 3-71 states that busy day analysis is determined by increasing the activation rates of all processes that run less than once per day to once per day. This approach does not account for the MODIS and ASTER products (e.g., the 10 day product's activation rate would remain at 35.5 times per day, instead of being 355 times on the busy day). As a result, the busy day static analysis does not properly reflect the amount of processing hat occurs on the busy day. The statement that there is no difference between the average day and the busy day at the EDC DAAC is grossly incorrect for actual operations. Twelve out of the 22 products to be produced at the EDC DAAC are affected by this error. ECS sizing is dependent upon accurate static analysis.

Originator's Recommendation

The static analysis for the busy day needs to be corrected for the EDC DAAC. The misinterpretation of the Technical Baseline is a critical issue, since it is the basis for all ECS sizing activities. All static analysis results should be checked to see if this type of interpretation error is present.

GSFC Response by:

GSFC Response Date

HAIS Response by: R. Miller

HAIS Schedule 11/15/95

HAIS R. E. M. Armstrong

HAIS Response Date 12/4/95

The originator is correct that MODIS has products that are produced on a periodic basis, and that the static analysis presented in the Release-B EDC DAAC Design Specification does not correctly reflect the periodicity of those products. ASTER, however, does not have products produced on a regular, periodic basis.

The MODIS team is currently re-assessing the techniques to be used to produce the MODIS periodic products because some of these products produce loads and have dependencies which result in very large hardware requirements for only a few days each month. ECS is working with the MODIS team to accurately reflect changes to the MODIS processing plans in the ECS dynamic model. The dynamic model will be updated to accurately reflect the modified processing plan, in order to provide the best possible understanding of the periodic nature of MODIS processing demand. In addition to updating the dynamic model, the ECS team will revise the static analysis in order to provide first-order verification of the dynamic model results.

The Release-B EDC DAAC Design Specification will be re-published for Release-B CDR. This version of the document will reflect the best data available from the MODIS team regarding the revised processing plan, and will accurately reflect, in both the static and dynamic models, the periodic nature of MODIS production.

Status **Closed** **Date Closed** **12/7/95** **Sponsor** **desJardins/Marinelli**

****** **Attachment if any** ******